REMARKS

This amendment is responsive to the Office Action dated January 13, 2006. Applicant has amended claims 1-3, 5, 6, 10-12, 17, 18, 20, 22-25. Claims 1-8, 10-18, and 20-25 are pending.

Claim Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-3, 5-7, 11-18 and 22-25 under 35 U.S.C. 103(a) as being unpatentable over Susai et al (US 2002/0059428) in view of Sridhar et al. (US 6,266,701), further in view of Savitzky et al. (US 6,012,083). The Examiner rejected claims 4, 10 and 21 under 35 U.S.C. 103(a) as being unpatentable over Susai et al in view of Sridhar et al. and Savitzky et al., as applied to claims 1, 6 and 18 above, in view of Bommareddy et al. (US 6,779,039). In addition, the Examiner rejected claims 8 and 20 under 35 U.S.C. 103(a) as being unpatentable over Susai et al in view of Sridhar et al. and Savitzky et al. as applied to claims 6 and 18 above, in view of RFC 2616, Fielding et al.

Applicant respectfully traverses the rejections to the extent such rejections may be considered applicable to the claims as amended. The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

With respect to previously pending claim 1, the Examiner primarily relied on Susai, stating Susai describes a computing device for use with a logical "server farm."[1] The Examiner stated that the Susai server farm provides at least the functionality[ii] equivalent processing capabilities of a single server. The Examiner then stated that, for purposes of the examination, he interprets the Susai 'server farm' as a single logical server."[2]

Based on this interpretation, the Examiner argued that "the Interface Unit [of the Susai device] monitors the server load and routes the client request [to one of the servers] based upon the load of the server." In summary, the Examiner relied on Susai for teaching routing client requests based on a server load.

[1] OA at. pg. 18.
[2] Id.

The Examiner acknowledged that Susai fails to describe the use of sockets, but relied on Sridhar, stating that Srihar teaches distributing request over a TCP connection to a corresponding socket of a server (See OA at pg. 19). The Examiner also relied on Savitzky, stating that Savitzky teaches a device having plurality of agents, each agent assigned to a different client TCP connection. Based on these teachings, the Examiner concluded that it would have been obvious to modify the Susai device in view of Sridhar and Savitzky to achieve Applicant's claimed invention, the motivation being to "reduce the processing loads on the server."

Applicant has amended claim 1 to further clarify that Applicant's claimed invention is directed to a device that provides connection-level monitoring to select between connections to a single physical server device when multiplexing traffic, instead of device-level monitoring to select between devices of a server farm for reducing overall device loads taught by the cited references. Similar elements have been added to independent claims 3, 6, 17, 18, 22 and 24.

For example, as amended, claim 1 requires an "HTTP multiplexor/demultiplexor configured to receive HTTP requests from the plurality of clients via a plurality of client TCP connections and *to monitor response parameters that are specific to individual ones of a plurality of server TCP connections* from the computer networking device to the physical server device." In this manner, Applicant's amended claim 1 is directed to a computer networking device that monitors connection-specific response parameters for individual TCP connections to the same server, and multiplexes between those connections to that server based on response parameters specific to individual TCP connections. Examples of monitored response parameters described in the present application include: (1) the fastest response time for the current TCP connections, (2) the fewest unfulfilled requests for the different connections to the same server, and , (3) the last connection to be accessed for a particular server. (See, pg. 14, ln. 16- pg. 15, ln. 4). These and other *connection-specific parameters* are recited in dependent claim 4.

Susai refers to "server load," which is well known in the art as the total amount of work that a computer system is doing at a particular instant in time.[3] In this case, the "server load" monitored by the Susai device describes the amount of work performed by a single physical server within the plurality of servers constituting the server farm. "Server load" is thus a

[3] Load (computing), http://en.wikipedia.org/w/index.php?title=Load_%28computing%29&oldid=45751584 (last visited March 31, 2006).

property of each physical device as a whole, and does not provide any indication of response parameters for individual TCP connections to the same server. In fact, if a physical server device has a plurality of TCP connections, each of those TCP connections shares the same "server load" property. That is, the "server load" property is not specific to individual TCP connections to the server device, and cannot be used to distinguish between TCP connections to the same device.

Susai's discussion of monitoring "server load" provides no suggestion of monitoring a single device at a much finer-grain level, i.e., at the connection level, and provides no suggestion that monitoring individual connections would be advantageous with respect to multiplexed connections to the same physical device. To be clear, the device taught in Susai "selects the server" (Susai, ¶ 69) or the device "distribute[s] client network connections between a set of servers in a server farm" (Susai, ¶ 93). That is, the Susai device is only concerned with selecting a server within a server farm based on *device-level loading*, i.e., the collective processing load experienced by the entire device.

Applicant's amended claims more clearly distinguish the claimed subject matter from Susai, which only suggests techniques for device-level monitoring and selection, and provides no teaching as to how to select between connections to the same device when multiplexing communications to that device, or the advantages of such an approach. Thus, Applicant's claimed invention provides a solution to problems not addressed by the teachings of the reference. Since the "server load" used by Susai to select different devices is not specific to individual TCP connections but rather device specific, how can one say that Susai teaches an HTTP multiplexer/demultiplexer that monitors response parameters that are specific to individual ones of a plurality of TCP connections to the physical server device?

Even if the Susai server farm is "interpreted" as a single logical device, as hypothesized by the Examiner, the techniques for selecting between devices based on processing loads of the physical devices cannot be applied for selecting between different TCP connections. The Examiner's conclusion overlooks the fact that none of the references, either singularly or in combination, provide a solution as to how Susai could be modified to select among a plurality of server TCP connections based on the monitoring of response parameters specific to individual network sockets when all of the Susai TCP connections share the same "server load" property. The server load property used by Susai and relied upon by the Examiner in forming the current

rejection is not specific to each of the TCP connections to that server device, but is instead a general property of the server device as a whole. Thus, Susai does not teach monitoring a plurality of server TCP connections to determine a response parameter that is specific to each of the server TCP connections.

To follow the Examiner's logic, assuming that the Susai device were modified as suggested by the Examiner, at best the "server load" parameter could be used by the device to select different physical devices in the logical server farm. Based on this selection, a multiplexed TCP connection would be used to communicate to that selected device as taught by Sridhar and Savitzky. No mechanism would exist to select between multiplexed connections to the same physical device of the Susai server farm, and the "processing loads" of the devices could not provide for such a selection. There are simply no logical answers to these questions, and the Examiner has not provided substantial evidence in the record that "fills this gap" in his conclusion as to how the Susai system could be modified to select between individual TCP connections to the same device using socket-specific response parameters when multiplexing TCP communications.

Furthermore, neither Sridhar nor Savitzky, either singularly or when taken in combination with Susai, address this deficiency. Sridhar, for example, is related to techniques for selecting different transport protocols, and describes how information may be multiplexed into a single stream. Sridhar is entirely silent with respect to monitoring each server TCP connection and then selecting the server TCP connection based on the monitoring. Instead, Sridhar merely states that multiplexing information "into a single data stream" may provide advantages of higher throughput and lower latency.[4] As another example, col. 23, ll. 45-55, of Sridhar only mention that techniques such as multiplexing, protocol spoofing and server site aggregation can be used to reduce latency. In fact, it appears the Examiner recognized the absence of any such teaching in Sridhar stating that "it is implicitly implied by the reference that a single stream takes up less bandwidth than a multiplexed stream." In other words, the Examiner appears to recognize that, at best, Sridhar merely describes a multiplexed data stream, but fails to provide any teaching or suggestion of a computer networking device that monitors different TCP connections to the same

[4] Abstract.

server, and multiplexes between the connections to that same server based on response parameters specific to individual TCP connections.

For at least this reason, even in view of the examiner's interpretation of Susai, it would not be obvious to one of ordinary skill in the art to modify the Susai device in view of the other references in a manner that achieves the elements set forth by Applicant's independent claims.

Moreover, the rejection of Applicant's claims is entirely dependent on the Examiner's "interpretation" of the Susai server farm to be a single logical device. However, this interpretation is not suggested by Susai nor any other reference of record. Neither Susai nor any other reference of record suggests that the described server farm is, or acts as, a single logical device. Thus, the Examiner's "interpretation" is mere conjecture, unsupported by the evidentiary record. Such conjecture cannot support a rejection under section 103. Applicant demands that the Examiner identify some prior art teaching supporting the "interpretation," and thereby afford Applicant an opportunity to address such evidence, or withdraw the rejections of Applicant's claims.

The cited references fail to establish a prima facie case for non-patentability of Applicant's claims 1-8, 10-18, 20-25 under 35 U.S.C. 103(a). Withdrawal of this rejection is requested.

Rejection for Obviousness-type Double Patenting:

The Examiner provisionally rejected claims 1-25 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 09/882375. Applicant notes the provisional status of this rejection. Accordingly, Applicant will address this issue if and when the rejection is formally applied.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date: April 13, 2006

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